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EXAMINER
VERDIER, C

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 3745 | |

DATE MAILED: 09/30/98

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/034,313

Applicant(s)

Claxton, III et al.

Examiner

Christopher Verdier

Group Art Unit

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☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-24 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-9 and 14-24 is/are rejected.

☒ Claim(s) 10-13 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☒ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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Reissue Oath/Declaration

The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

It does not state that the person making the oath or declaration has reviewed and understands the contents of the specification, including the claims, as amended by any amendment specifically referred to in the oath or declaration.

Note that the reissue declaration states that "original names 1-14", not original claims 1-14 have been reviewed and understood.

Reissue Rejections

Claims 15-24 are rejected under the "Recapture Doctrine". See the case law cited in MPEP 1412.02 and the recent decision, *In re Clement*, 45 USPQ 2d 1161 (Fed. Cir. 1997). In the parent application 08/321,857 which matured into US Patent 5,496,150, Applicants rewrote independent claim 1 to include the allowable limitation of claim 4 of the bearing cartridge being separably fastened within the diffuser core with the bearing cartridge carrying axially spaced bearings which surround and rotatably support the drive shaft and canceled dependent claim 4. These limitations were added by Applicants in the amendment dated July 28, 1995 in order to define over the prior art. The deletion of the language which was added to claim 1 of the issued patent in order to overcome the prior art and substitution of broader language in reissue claims 15-24 is a direct violation of the "Recapture Doctrine".

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Claims 16 and 21 are rejected under 35 U.S.C. 251 as being based upon new matter added to the patent for which reissue is sought. The added material which is not supported by the prior patent is as follows:

- Claims 16 and 21 recite that the only active element removed to allow removal of the bearing is the impeller. This is new matter because the original specification states that in addition to the impeller, the suction bell 22 and the retaining ring 70 are removed in order to allow removal of the bearing.

Claim Rejections - 35 USC § 112

Claims 16 and 21 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 16 and 21 recite that the only active element removed to allow removal of the bearing is the impeller. This is new matter and is incorrect because the original specification states that in addition to the impeller, the suction bell 22 and the retaining ring 70 are removed in order to allow removal of the bearing.

Claims 15-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as

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the invention. In claim 15, line 7 and claim 20, line 5, "readily removable" is indefinite. This is a relative term which renders the claims indefinite. "Readily removable" has no clear meaning, the term "readily removable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Claims 16 and 21 are inaccurate in that they recite that the only active element removed to allow removal of the bearing is the impeller. This is incorrect and inaccurate because the specification states that in addition to the impeller, the suction bell 22 and the retaining ring 70 are removed in order to allow removal of the bearing.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was

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made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4, 6-7, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over United Kingdom Patent 257,111 in view of Springer. The United Kingdom Patent discloses a vertical turbine pump substantially as claimed including a bulbous diffuser section 2 with narrow upstream and downstream sections 1, 3, respectively, an impeller 9 with flared shrouds which are in part axially spaced from one another, spiral blades 10, a bulbous diffuser core 6, stationary vanes 7, 7' with curved upstream ends and axial downstream ends, and a bearing assembly 5 within the diffuser core 6. However, the United Kingdom Patent does not disclose a bearing cartridge in the form of a tubular housing separately fastened within the diffuser core with the bearing cartridge carrying axially spaced bearings that are fixed within the tubular housing.

Springer (figure 12) shows a pump having a bearing cartridge 300 in the form of a tubular housing separately fastened within a support 248 with the bearing cartridge carrying axially spaced bearings 299 that are fixed within the tubular housing for the purpose of allowing easy removal of the bearings.as a whole unit.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to replace the bearing assembly 5 of the pump of the United Kingdom

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Patent 257,111 with a bearing cartridge in the form of a tubular housing separately fastened within the diffuser core with the bearing cartridge carrying axially spaced bearings that are fixed within the tubular housing as taught by Springer for the purpose of allowing easy removal of the bearings as a whole unit. Although Springer shows the tubular housing mounted to a support, one of ordinary skill in the art would have recognized the applicability to the diffuser core of the United Kingdom Patent. Concerning claim 14, note that flange 304 of the bearing cartridge of Springer is a formation which is adapted to mate with a pair of pliers for facilitating removal and installation of the bearing cartridge.

Claims 5 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over United Kingdom Patent 257,111 and Springer as applied to claims 4, 7, and 7, respectively above, and further in view of Ruyak. The modified pump of United Kingdom Patent 257,111 shows all of the claimed subject matter except for the tubular housing being fastened to the diffuser core with threads on the tubular housing.

Ruyak (figure 1) shows a pump having a bearing cartridge 56 in the form of a tubular housing that carries a bearing 54 and is secured to support plate 20 by threads on the tubular housing for the purpose of providing an easily removable bearing assembly.

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It would have been further obvious at the time the invention was made to a person having ordinary skill in the art to form the modified pump of the United Kingdom Patent such that the tubular housing is fastened to the diffuser core by threads on the tubular housing as taught by Ruyak for the purpose of providing an easily removable bearing assembly. Although Ruyak shows the tubular housing mounted to a support plate, one of ordinary skill in the art would have recognized the applicability to the diffuser core of the United Kingdom Patent.

Claims 15, 16 as far as claim 16 is definite, 17-20, 21 as far as claim 21 is definite, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over United Kingdom Patent 257,111 in view of Ruyak. The United Kingdom Patent discloses a pump substantially as claimed including a casing 2, an impeller 9, a diffuser core 6 disposed in the casing, and a bearing assembly 5 within the diffuser core 6. However, the United Kingdom Patent does not disclose a bearing cartridge that houses the bearing such that the bearing is readily removable from an upstream section of the casing, with the bearing cartridge having an engagement structure that is received by a reciprocal engagement structure of the diffuser core.

Ruyak (figure 1) shows a pump having a bearing cartridge 56 in the form of a tubular housing that carries a bearing 54 which is readily removable from an upstream section of the pump and is secured to support plate 20 by threads on the tubular housing for the purpose of providing an easily removable bearing assembly.

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It would have been obvious at the time the invention was made to a person having ordinary skill in the art to form the pump of the United Kingdom Patent such that a bearing cartridge houses the bearing such that the bearing is readily removable from an upstream section of the casing, with the bearing cartridge having an engagement structure that is received by a reciprocal engagement structure of the diffuser core as taught by Ruyak for the purpose of providing an easily removable bearing assembly. Although Ruyak shows the tubular housing mounted to a support plate, one of ordinary skill in the art would have recognized the applicability to the diffuser core of the United Kingdom Patent.

Prior Art

Prior art made of record but not relied upon is considered pertinent to Applicant's disclosure and consists of 2 patents.

Claus and Fukute are cited to show bearings received within bearing cartridges that are threaded to support structure.

Allowable Subject Matter

Claims 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process. If Applicants desire a transfer of the patent drawings to this reissue application, a letter requesting transfer of the drawings from the patent file 5,496,150 should be submitted.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Verdier whose telephone number is (703) 308-2638. The examiner can normally be reached on Monday-Friday from 9:00 a.m. to 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached on (703) 308-1044. The fax phone number for this Group is (703) 305-3588.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

CV
September 9, 1998


Christopher Verdier
Primary Examiner
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